Before the
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

In the Matter of	)	
	)	
Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions	)	Docket No. 12-268

COMMENTS OF THE INFORMATION TECHNOLOGY INDUSTRY COUNCIL

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TABLE OF CONTENTS

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The Information Technology Industry Council (ITI) hereby files these comments in response to the Notice of Proposed Rulemaking in the above-captioned proceeding.[1]

ITI represents 50 of the nation's leading information technology companies, including computer hardware and software, Internet services, and wireline and wireless networking companies.[2] ITI is the voice of the high-tech community, advocating policies that advance U.S. leadership in technology and innovation, open access to new and emerging markets, support e-commerce expansions, protect and enhance consumer choice, and foster increased global competition.

I. INTRODUCTION AND SUMMARY.

ITI supports the Commission's efforts to make more spectrum available for

[1] *Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*; Docket No. 12-268.
[2] For more information on ITI, including a list of its member, please visit http://www.itic.org/about/member-companies.dot.

mobile broadband through this Notice by implementing the authorized powers in the Middle Class Tax Relieve and Job Creation Act or 2012. ITI's member companies operate across the mobile ecosystem – including network equipment providers, fiber providers, mobile handset providers, wireless chipset manufacturers, and mobile software and application providers – and welcome the opportunity to provide comments on the issues raised in this NPRM. ITI strongly believes that making additional spectrum available for mobile broadband is critical to meeting the public's demand and expectations from their mobile devices, as well as ensuring the growth and innovation of the wireless ecosystem continues.

The Commission is well aware of the need for additional spectrum to be made available for mobile broadband, and specifically for the incentive auction process to be successful. The National Broadband Plan put forward the goals of making 300 MHz of spectrum available for mobile broadband by 2015, and 500 MHz by 2020. Of the 300 MHz that would be made available by 2015, 120 MHz of that is to come from incentive auctions.[3] The Commission correctly notes that this is important to meet these goals as part of its efforts to free-up usable spectrum: Smartphone penetration is increasing; smartphones drive higher data usage per subscriber; and the impact of these trends along with the growth in mobile video and "smart" connected devices will have an enormous aggregate impact on mobile broadband networks.[4] An Alcatel-Lucent study estimates that by 2016, these spectrum-hungry tablets and smart phones will make up 59% of the mix of mobile devices compared to only 19% feature phones.[5]

[3] National Broadband Plan, Exhibit 5-E, Actions and Timeline to Fulfill 300 MHz Goal by 2015.
[4] National Broadband Plan, 5.1 The Growth of Wireless Broadband.
[5] Bell Labs Traffic Index Study of 2012.

According to estimates from Cisco, mobile data traffic will increase 18-fold between 2011 and 2016, growing at a compound annual growth rate (CAGR) of 78 percent between 2011 and 2016. Global mobile data traffic will grow three times faster than fixed IP traffic from 2011 to 2016, rising from 2 percent of total IP traffic in 2011 to 10 percent of total IP traffic in 2016. Cisco estimates traffic from wireless devices will exceed traffic from wired devices in 2014, and by 2016, Wi-Fi and mobile devices will account for 61 percent of all IP traffic while wired devices will only account for 39 percent of IP traffic.[6]

Similarly, a recent study from Ericsson found mobile broadband subscriptions have grown around 55 percent year-on-year and have reached over 1.4 billion worldwide, while mobile broadband (defined as CDMA2000 EV-DO, HSPA, LTE, mobile WiMAX and TD-SCDMA) subscription penetration in North America in 2012 Q3 reached 101 percent.[7]

These numbers indicate a clear growth trend in the use of mobile devices, and a need to move expeditiously to make spectrum available for mobile broadband. A successful incentive auction process is one of the best tools to meet this demand, and address these trends in the immediate future. Not fully realizing the potential of the incentive auction, or not doing so in a timely manner, will be a setback for meeting the goals of the National Broadband Plan, meeting the needs of industry to address the growth in mobile demand, and meeting the needs of the American public that is increasingly relying on broadband connected mobile devices.

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[6] *Cisco Visual Networking Index, Forecast and Methodology, 2011-2016*; released May 30, 2012.

[7] *Ericsson Mobility Report, on the Pulse of the Networked Society*; released November 2012; http://www.ericsson.com/res/docs/2012/ericsson-mobility-report-november-2012.pdf.

ITI believes that an auction structured to utilize market efficiencies, private agreements, and maximize participation will result in a successful outcome for all stakeholders. Whenever possible, the Commission should refrain from overly complicated procedures to achieve ends that could be reached through private sector agreements. Secondly, the Commission should ensure maximum participation in the forward auction to fully realize efficiencies in next generation broadband technology. The Commission should refrain from mandating technical requirements for competitive, or other purposes. Lastly, the Commission should establish guard bands that are no larger than technically reasonable to prevent interference.

II. THE COMMISSION SHOULD SIMPLIFY PROCEEDINGS BY RELYING ON PRIVATE PARTY SOLUTIONS WHENEVER POSSIBLE.

ITI believes that the Commission should rely on private negotiations and agreements whenever possible to facilitate simplicity in the proceeding and maximize participation. With proper oversight, the Commission should allow private arrangements that will increase participation in the reverse and forward auctions. For example, the channel sharing agreements between broadcasters are something that could and should be resolved through private negotiations. The Commission should not require both parties to file pre-auction applications, or take additional steps that may complicate parties' willingness or ability to channel share.[8] Requiring overly burdensome certifications or production of information relating to channel sharing agreements could have a negative effect on participation in the reverse auction.[9]

[8] NPRM, ¶ 245.
[9] NPRM, ¶ 250.

III. MAXIMIZING PARTICIPATION IN THE FORWARD AUCTION SHOULD BE A PRIORITY IN THE PROCEEDING.

ITI supports maximizing participation in the forward auction, and believes the Commission should use extreme caution when restricting bidding based on its spectrum screen. Having a rule that would allow a single participant to acquire no more than one-third of the spectrum available could be problematic if very little spectrum comes available in a certain market.[10] Having such arbitrary rules may prevent a participant from acquiring spectrum necessary to fully realize the efficiencies long term evolution (LTE) technology can provide.

ITI has previously supported efforts to use large blocks of spectrum for providing LTE service.[11] To fully realize the efficiencies of LTE technology, wide swaths of spectrum are ideal. While smaller blocks can, and should be used to provide LTE, 10 MHz and larger blocks are where LTE efficiencies are most realized.[12] While ITI is aware of potential competitive issues with spectrum aggregation, we would advise the Commission to look at all factors, including whether auction participants that may be able to use the spectrum more efficiently if they are allowed to acquire larger blocks, and not just at whether the participant may be surpassing an inflexible number or percentage of the spectrum available.

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[10] NPRM, ¶ 384.

[11] See ITI filing from May 17, 2012, in the *Notice of Proposed Rulemaking and Notice of Inquiry for flexible use of spectrum currently assigned to the Mobile Satellite Service in the 2 GHz band (WT Docket No. 12-70; ET Docket No. 10-142; WT Docket No. 04-356)*; also see ITI filing from June 6, 2011, in the *Applications of AT&T Inc. and Deutsche Telecom AG for Consent to Assign or Transfer Control of Licenses and Authorizations (WT Docket No. 11-65).* In both instances, ITI supported making, at minimum, paired, 20 MHz blocks of spectrum available for providing LTE service.

IV. MANDATES SHOULD NOT BE USED WHERE INNOVATION CAN SOLVE TECHNICAL PROBLEMS.

The dramatic evolution we have seen in mobile devices is largely due to the innovative environment under which ITI's member companies have operated, free from restrictions, regulation, and mandates. ITI has serious concern with any discussion of forcing technology into devices. Given that, ITI has serious concern with any rule or mandate on commercial interoperability at this time.[13]

The most advanced chipsets currently available for mobile devices can support three bands under 1 GHz. With one of those almost always being dedicated to cellular, capability for two other bands below 1 GHz remains. Requiring interoperability across additional bands would result increase costs and complexity for handset makers since there currently are no chips that can meet such a mandate. Device manufacturers are innovating and developing devices to meet the demands of consumers by providing devices with decreased size, increased numbers of features and functions, and improved battery life. Requiring commercial interoperability even before it is clear what the band plans will look like, makes it exponentially more difficult for companies to innovate as they are trying to meet these requirements; undoubtedly in the short term, any such mandate would result in bulkier handsets, fewer features and functions, and less battery life.

V. THE COMMISSION SHOULD MAXIMIZE THE USE OF THE SPECTRUM RECLAIMED THROUGH THE REVERSE AUCTION.

ITI believes that the solution to the spectrum shortage needs to be looked at holistically. Unlicensed use is undoubtedly a part of the solution. As spectrum is

[13] NPRM, ¶ 162.

reclaimed from the broadcaster participants in the 600 MHz band however, ITI believes that the FCC should create band plans that maximize the auction of cleared spectrum.

VI. CONCLUSION.

Again, ITI welcomes the opportunity to comment on the Commission's implementation of its new authority for an incentive auction process. ITI believes that the points included in this filing are critical to making the process successful, meet our nation's pressing spectrum needs, and continue to fuel the tremendous innovation and investment we have seen in the mobile broadband ecosystem over the past decade plus. ITI and its member companies stand ready to work with the Commission to make the auction process a success.

Respectfully submitted,

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